

JITF Web Testing

Test Planning Oversight Committee 3 May 2001

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- Types of web-based applications
- Testing issues for web-based applications
- Web testing requirements documentation
- Types of problems found
- What else should be done?
- Summary

Types of -based Applications

Thick client

- Software must be loaded on client platforms
- Application provides web interfaces and does not require browser
 - e.g., Java applications

• Thin client

- Software loaded on workstation is limited to plugins
- Access to application is via web browser



Integration Testing f Applications

- For all IMAs, integration testing evaluates level of effort to install, configure and use application
 - I.e., level of risk to integrate IMA into operating site
 - Including administration and security issues



Testing Issues f based Applications

- JITF determines requirements that are applicable during documentation review and installation
 - Applicable integration requirements vary based on type of application
 - Thick vs. thin client
 - Single (central) server vs. fielded servers accessible through web interface



Testing Issues f based Applications

• Examples

- Color mapping requirements do not apply to browser-based clients
- Most installation requirements apply to thick clients but typically not to thin clients
- Some Operation requirements do not apply to thin clients
 - E.g., effect of shutdown of client workstation, exhaustion of client disk space



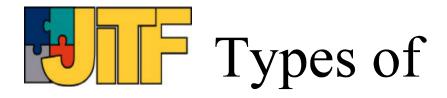
Testing Issues f based Applications

- Length of test
 - Thick client no difference in practice from client/server IMA
 - Thin client
 - IMA with fielded servers no difference in test duration
 - IMA with central server test duration is shorter since numerous installation, environment, operation, and GUI requirements are not evaluated



Web Integration Requirements Documentation

- Definition of community baseline for browsers and other web products found in v3.0 of DoDIIS Profile
- Integration testing requirements for web-based applications
 - Joint Integration Test Facility (JITF) DoDIIS
 Integration Requirements and Evaluation Procedures
 Version 3.0 for Enterprise (Web-based) Applications
 - Also contained in master integration requirements document



Installation

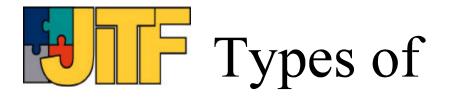
Inaccuracies/omissions in server installations

Security

- Open access to server files and directories
- Web page vulnerabilities
- Lack of documentation on audit architecture

Administration

Management of user accounts



- User Interface
 - Background interfering with readability
- Functional
 - Errors upon selecting buttons
 - Error message may be from DBMS and not readily understood by user



What Else Should Be Done?

- Compatibility with Internet Explorer and Netscape
- Conformance with HTML, XML, etc.
- Security
 - Penetration testing
 - Auditing policy
- Functional
 - Link validation
 - Interface design



- Web-based applications are varied
 - Thick to thin clients
 - Selection of applicable integration requirements depends upon application design
- Web requirements are documented
- Web-based ≠ problem free!
- What additional testing is required?